PORTABLE COMPUTER STANDING SUPPORT STRUCTURE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention is directed toward a portable computer standing support structure and more particularly, toward a tablet PC standing support structure for enabling a tablet PC to be positioned on a base member in an inclined position.

2. Description of Related Art

A tablet PC or similar portable computer may be used with a base member having a keyboard. The user may use the touching pen of the portable computer to operate the portable computer, or the keyboard of the base member for data input. Therefore, the tablet PC and the base member form a dual-usage portable computer.

FIG. 1 is a perspective side view showing a tablet PC supported on a base member according to the prior art. As shown in FIG. 1, the tablet PC **91** has the bottom edge stopped against a stop flange **922** at the base member **92** and the back side supported on a support arm **923** of the base member **92**. The base member **92** has a keyboard **921** on the top face for data input.

However, because the tablet PC **91** is supported on the base member **92** in an inclined position of high steepness, it is inconvenient to operate the tablet PC **91** with a touching pen **93**. Frequently using a touching pen **93** to operate the tablet PC **91** may cause injury to the user's wrist and elbow.

SUMMARY OF THE INVENTION

The present invention is designed to overcome the drawback of the prior art discussed above. It is the main object of the present invention to provide a portable computer standing support structure, which provides multiple modes of use and is ergonomic to prevent injury to the user.

To achieve this and other objects of the present invention, the portable computer standing support structure comprises a base member and a portable computer. The base member comprises a top face, a front edge, a rear edge, a left-side edge, a right-side edge, a support arm fastened pivotally on the top face near the rear edge and rotatable upwardly relative to the top face, at least one front locating device formed on the top face near the front edge, and at least one rear locating device formed on the top face between the front edge and the rear edge. The portable computer comprises a bottom edge, a front display face, a back face, and at least one locating device protruded from the back face adjacent to the bottom edge and adapted to selectively engage into the at least one front locating device and at least one rear locating device of the base member. The portable computer can be supported on the support arm of the base member in a first inclined position where the back face of the portable computer is supported on the support arm of the base member and the at least one locating device of the portable computer is respectively set into engagement with the at least one rear locating device of the base member. Alternatively, the portable computer can be supported on the support arm of the base member in a second inclined position where the back face of the portable computer is supported on the support arm of the base member and the at least one

locating device of the portable computer is respectively set into engagement with the at least one front locating device of the base member for enabling the portable computer to be operated with a touching pen.

By means of the design of the front and rear locating devices of the base member, the portable computer can be supported on the base member between different inclined positions. When the portable computer is positioned on the at least one rear locating device of the base member, the user can use a keyboard or the like to input data into the portable computer. When the portable computer is positioned on the at least one front locating device of the bas member, the user can use a touching pen to input data into the portable computer. When using a touching pen to operate the portable computer, the portable computer is supported in a smoothly inclined position. This ergonomic design enables the user to operate the portable computer with the hand comfortably without causing injury to the user's hand.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective side view showing a tablet PC supported on a base member according to the prior art.

FIG. 2 is an exploded view of the preferred embodiment of the present invention.

FIG. 3 is an enlarged view of a part of the present invention, showing the raised portions of the portable computer engaged into the recessed holes of the base member.

FIG. 4 is a schematic side view showing the portable computer

supported on the base member in the position of low steepness.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is shown in FIG. 1 a portable computer standing support structure constructed in accordance with the principles of the present invention. The portable computer standing support structure essentially includes a base member **1**, and a portable computer **2**. The base member **1** has a top face **10**, a front edge **101**, a rear edge **102**, a left-side edge **103**, and a right-side edge **104**. A keyboard **14** is mounted on the top face **10**. Two stop flanges **13** are respectively protruded upwardly extended from the top face **10** adjacent to the two distal ends of the front edge **101**.

A support arm **11** is fastened pivotally with the top face **10** of the base member **1** near the rear edge **102**, and can be rotated upwardly from the top face **10** of the base member **1**. Two front locating devices**12** are formed on the top face **10** of the base member **1** near the front edge **101** and respectively disposed adjacent to the left-side edge **103** and the right-side edge **104**. Two rear locating devices **15** are formed on the top face **10** of the base member **1** between the front edge **101** and the rear edge **102**, and respectively disposed adjacent to the left-side edge **103** and the right-side edge **104**. According to the present preferred embodiment, the front locating devices **12** and the rear locating devices **15** are recessed portions.

The portable computer **2** according to the present preferred embodiment is a tablet PC, having a bottom edge **201**, a front display face

21, and a back face 22. Two locating devices 23 are protruded from the back face 22 of the portable computer 2 adjacent to the bottom edge 201. According to the present preferred embodiment, the locating devices 23 are raised portions fitting the recessed portions 15 of the base member 1.

Referring to FIGS. 3 and 4 and FIG. 2 again, the portable computer 2 can be put on the top face 10 of the base member 1 in an inclined position of high steepness with the display face 21 facing upwards, wherein the back face 22 of the portable computer 2 is supported on the support arm 11, and the two locating devices 23 of the portable computer 2 are respectively set into engagement with the two rear locating devices 15 of the base member 1, i.e., the raised portions 23 are respectively engaged into the rear recessed portions 15 of the base member 1. At this time, the user can use the keyboard 14 of the base member 1 for data input.

Alternatively, the portable computer 2 can be put on the top face 10 of the base member 1 in an inclined position of low steepness with the display face 21 facing upwards, wherein the back face 22 of the portable computer 2 is supported on the support arm 11, and the two locating devices 23 of the portable computer 2 are respectively set into engagement with the two front locating devices 12 of the base member 1, i.e., the raised portions 23 are respectively engaged into the front recessed portions 12 of the base member 1, and the bottom edge 201 of the portable computer 2 is stopped against at the stop flanges 13 of the base member 1. At this time, the user can use a touching pen 24 to input data, as shown in FIG. 4.

As indicated above, by means of the front locating devices 12 and

rear locating devices **15** of the base member **1**, the portable computer **2** can be supported on the base member **1** between two tilted positions, i.e., the user can use the keyboard **14** for data input when positioned the portable computer **2** on the rear locating devices **15**, or use the touching pen **24** to input data when positioned the portable computer **2** on the front locating devices **12**. Therefore, the aforesaid design of the present invention greatly improves the convenience of use of the portable computer **2**. When using the touching pen **24** to operate the portable computer **2**, the portable computer **2** is supported in a smoothly inclined position. This ergonomic design enables the user to operate the portable computer **2** with the hand comfortably without causing injury to the user's hand. Further, the design of the stop flanges **13** ensures positive positioning of the portable computer **2**.

The aforesaid front locating devices **12** and rear locating devices **15** are not limited to the design of recessed portions. Snap, hook and eye means, or other similar designs may be employed as a substitute.

Although the present invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention as hereinafter claimed.